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ABSTRACT

In this curriculum guide, guidelines for teaching children about fire safety and related topics and activities representing an interdisciplinary approach to fire safety are outlined. Major fire hazards and methods of dealing with them are described. Possible sites for field trips and films relating to fire are listed. The rules of the New York City Fire Prevention Contest are stated. (WI)

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ED166352

Fire!

Fire Prevention and Safety:

A Teacher's Handbook

UD 019171

Fire Department
of the City of New York

Board of Education
of the City of New York

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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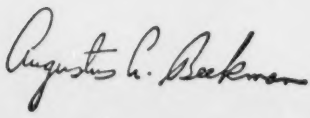
INTRODUCTION

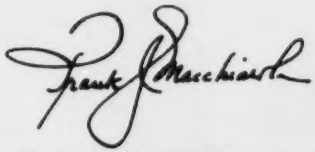
Fire, a great and necessary aid to mankind, can also be a destroyer of lives, property, and neighborhoods. Fires are a major threat to our city. In New York City during 1977 there were 129,8[illegible] blazes, resulting in 290 deaths (including 57 children) and billions of dollars worth of property damage.

This situation has been brought to a near-crisis level by the increasing number of false alarms turned in each year. It is a sad commentary indeed that in 1977 the number of false alarms was more than double the number of actual fires! The 263,932 false alarms (more than 700 a day) represent a 27% increase over 1976 figures. False alarms delay the arrival of firefighting equipment and therefore greatly increase our risk of death, personal injury, or property destruction. Even as we strive to protect ourselves and preserve our communities, arsonists seek to undermine our efforts.

It is incumbent upon us as educators to mount a campaign aimed at reducing the risks to which our population is exposed. In cooperation with the Fire Department of New York and the New York Board of Fire Underwriters, the New York City Board of Education introduces this revised program of fire safety education for implementation within New York City schools. The activities and understandings appearing in this document are consistent with the teachers' responsibilities as outlined in *Minimum Teaching Essentials: Scope and Sequence*[1], and other curriculum bulletins. It is hoped that a comprehensive program of fire safety education will provide our students with the knowledge, skills, and attitudes necessary to help them avoid the catastrophic effects of fire.



Commissioner, Fire Department of the City of New York



Chancellor, Board of Education of the City of New York

Board of Education, City of New York, *Minimum Teaching Essentials: Scope and Sequence* Experimental Edition. (New York: Board of Education, 1977).

59th ANNUAL NEW YORK CITY FIRE PREVENTION CONTEST

The success of any educational program hinges upon the motivation of its participants. To this end, the fire safety unit may be introduced by an explanation of the 59th Annual New York City Fire Prevention Contest. Students are invited to produce suitable entries for this citywide contest. It is hoped that participation in the contest, in conjunction with fire safety education programs,* will impress upon our children the importance of fire prevention.

Contest Guidelines

- Projects are to be created in class and may be started at any time after receipt of this booklet.
- Project ideas include, but are not necessarily limited to, essays, posters, collages, photos, sketches, paintings, sculpture, and constructions.
- Individual and class-winning projects should be selected based upon the demonstrated knowledge of fire prevention, originality, creativity, and general appearance.
- All class winners will be awarded certificates at a school assembly.
- The two best class projects for each category are to be submitted to the school's judging committee; they will select the best projects for each grade grouping.
- Each district will select six winning projects to include two from each of the grade levels: K-2, 3-5/6 for the elementary schools, and 6-9 for intermediate/junior high schools.
- The best projects in the school should be submitted to the community school district office or appropriate parochial or religious school office. Projects should include the following information: Student's Name, Class, Age, School, School's Address, Teacher's Name, Parent's Name, Home Address.
- A judging committee will select winners in the two categories: Art/Media and Essay Writing. Projects must be submitted on or before Friday, January 19, 1979.
- The community school district office will be responsible for transmitting winning projects to the New York City Fire Department, Community Relations Bureau, 9th Floor, 110 Church Street, New York, New York 10007 on or before Thursday, February 15, 1979, who will notify winners and the community school district office by mail during the month of March.
- Winners will be awarded trophies at the Fire Department's Annual Awards Ceremony at the High School of Fashion Industries, 225 West 24 Street, New York, New York in the Spring 1979.

**NOTE: The fire safety lessons presented herein can be infused into the existing curriculum for each class. Activities were selected to help guide teachers in the development of projects for the contest.*

BACKGROUND INFORMATION

The topics and activities in this booklet represent an interdisciplinary approach to fire safety. Although most of the activities, in accordance with c. ntest rules, are drawn from art and language arts, every effort has been made to touch as many other curriculum areas as possible. The grade level grouping of K-2, 3-5 and 6-9 is designed for maximum flexibility to afford teachers the widest opportunity to adapt activities to the ability level of their classes.

Some of the activities appearing in this booklet require familiarity with technical aspects of fire prevention. The following background information is provided, therefore, to assist teachers in planning their units.

The Fire Triangle

There are three things needed for a fire: oxygen, fuel, and heat. This phenomenon is sometimes referred to as the fire triangle. All three elements must be present in order for a fire to burn. (In other words, the triangle must be complete.) Fire prevention and firefighting are based upon the elimination of one or more of these three essential factors. To remove the oxygen, smother the fire by covering it or closing doors and windows. To remove the fuel, take away the flammable material. To remove the heat, douse the fire with water to lower the temperature.

The Fire Triangle

OXYGEN + FUEL + HEAT = FIRE

C. A. R. E.

The initials **C.A.R.E.** indicate the actions which should be taken, in order, when fire strikes. One should:

C = *Clear* the area of any people involved;

A = *Alert* The Fire Department by transmitting the *alarm;*

R = *Restrict* and confine the fire by closing doors;

E = *Extinguish* the fire, if possible.

Attempting to extinguish the fire before taking the first three steps may be disastrous; if evacuation is slowed or the alarm is delayed the risk of personal injury or property destruction is greatly increased.

Safety Rules

The three major causes of fire in the home are cooking carelessness, smoking carelessness, and the misuse of electricity. These three behaviors resulted, respectively, in 18%, 2%, and 7% of 54,957 structural fires in New York City (according to 1975 Fire Department statistics). Being familiar with basic safety rules in these areas may help avoid accidents.

When Cooking –

- Minimize the use of fats and oils.
- Use adequate size pots and pans.
- Shut off gas jets before removing pots from the stove.
- Wipe away fat and grease drippings before returning pan to the stove.
- Keep large pot cover available for smothering stove top fires.
- Check connective hose to gas stove for leaks.
- When broiling meats use a rack and sprinkle 1 to 2 tbs. of flour in the pan to absorb the melted fat.
- Have a carbon dioxide or dry chemical extinguisher handy. A box of baking soda makes a good substitute.

When Smoking Cigarettes –

- Do not smoke while lying in bed or on a sofa.
- Be careful when discarding cigarettes into the rubbish as hot ashes may ignite the rubbish.
- Do not smoke while drowsy.

Special Note:

Cigarette smoking is also regarded as a major health hazard and should be discussed in these terms.

When Using Electricity –

- Avoid long extension cords.
- Do not run extension cords under carpeting.
- Discontinue using outlet "octopuses" (many plugs in one outlet).
- Make certain that each outlet serves only one heavy power demand such as a refrigerator or a toaster.
- Use air conditioners, portable electric heaters, and broilers only when there is adequate wiring to carry the load.
- Be aware that dimming light or a shrinking television picture may indicate too heavy a demand on one circuit.
- Use proper size fuses and circuit breakers. They are a safeguard and burn out or open when the ideal limit for the line has been exceeded. Use of a higher amperage replacement fuse may result in a fire in the wall.
- Purchase only those appliances or wiring bearing a label from the Underwriter Laboratory (U.L.).
- Provide clearance for air circulation wherever you place appliances.

The Home Fire Checklist: Suggested Items

Safety Plan –

- Have you planned at least two ways to escape from each room?
- Do you regularly rehearse fire drills with your family?
- Are exit routes clear of furniture?

Cooking and Heating –

- Are furnaces, stoves, etc. far away from combustible walls?
- Are they in good repair?
- Are portable heaters maintained properly?
- Are there any curtains near any stove or heater?

Electricity –

- Do extension cords run under rugs?
- Are appliance and other cords in good repair?
- Is the right size fuse or circuit breaker in the main control box?

Housekeeping –

- Is paint in tightly closed metal containers?
- Are gasoline and other flammable liquids in safety cans and away from heat?
- Are keyless, approved window gates used on fire escape windows?

Arson

An arson fire is set once every minute in the United States; it is the number one cause of property loss due to fire. In 1977 fire marshals in New York City investigated over 8800 intentionally caused fires, an increase of 23% over 1976. We cannot ignore the problem as long as lives are being lost and neighborhoods destroyed. Although we need to deal with arson in our classrooms, caution is advised in discussing this sensitive topic. Students must, however, be acquainted with the subject of arson, its destructive force, and its criminal aspects.

First Aid For Burns*

First Degree –

- Cold water applications, dry dressing if necessary

Second Degree –

- Cold water applications, apply water soaked cloths, cover with dry sterile dressing

Third Degree –

- Do not remove clothing adhering to burn, cover with thick sterile dressing, monitor for respiratory difficulty, transport victim to hospital as soon as possible.

**The above information is very basic. IT IS STRONGLY SUGGESTED that before teaching this area the teacher consult* Standard First Aid and Personal Safety *by the American National Red Cross for full details.*

Dear Firemen,
We were sorry We were late and
We missed seeing your fire-station.
We were walking back to school
when We saw a fire We saw you
come and put out the fire. We saw you save
two little children.

Topic 1: The Helpful and Harmful Sides of Fire

Understandings
- Fire helps us in many ways.
- Fire can hurt us if we are not careful.
- We can control fire at certain times.

ACTIVITIES

SCIENCE
- Imagine what life would be like without fire. What would our city be like? What would we be unable to do?

LANGUAGE ARTS
- Tell a story about a fire you have seen or heard about.
- Listen to the story *I Know A Fireman* by Barbara Williams.

ART
- Draw two pictures, one showing how fire helps us and one showing how it can hurt us.

Topic 2: The Job of A Firefighter

Understandings
- The firefighter is a community helper.
- The firefighter has many special tools.
- Firefighters work to protect the safety of others.

ACTIVITIES

SOCIAL STUDIES
- Visit a firehouse. The firefighters will explain the trucks, special clotning and equipment and their jobs. Write a short paragraph about what you saw.

ART
- Put up a bulletin board display of firefighters and the equipment they use.
- Draw or paint a picture about what you saw on your visit to the firehouse.
- Read a story about fire or firefighters. Draw a picture of your favorite part of the story.

LANGUAGE ARTS
- After visiting a firehouse, write a letter of thanks.
- Using a picture of a firefighter and a firehouse, label all the tools and special pieces of equipment that you see.
- Write a short composition about the job of a firefighter.
- Visit the library and select a book about fires or firefighters. Write a short composition describing what you learned from the book you read.

- Listen to the record "The Little Fireman" by Margaret Wise Brown. Discuss the job of a firefighter.
- Learn poems and songs about firefighting.

Topic 3: Reporting a Fire

Understandings

A fire drill is designed to protect you.

It is important to know your name and address for reporting emergencies.

Everyone should know how to report a fire.

Only real fires should be reported — never false alarms.

ACTIVITIES

SOCIAL STUDIES

- Learn the signal and rules for a fire drill. The entire class should practice fire drill procedures.
- Going around the room, each student should give his/her name and address, including apartment number.
- Using model telephones, practice reporting a fire by dialing 911. Give your full name and address. (Teachers: stress the dangers of false alarms.)
- Using models of street alarm boxes learn to pull the handle or talk into the voice box to turn in an alarm. (Teachers: stress the dangers of false alarms.)
- Draw a map of your street. Show where the fire hydrants and fire alarm boxes are.

LANGUAGE ARTS

- Discuss the acronym "C.A.R.E." and what the letters stand for.

Topic 4: Fire Prevention and Safety

Understandings

Many fires are caused by carelessness.

Accidents can be prevented by following safety rules.

Holiday times can be dangerous.

Small fires can often be put out by adding water, taking away the oxygen or fuel.

ACTIVITIES

LANGUAGE ARTS

- Read the story of Smokey the Bear. What is Smokey's job?
- Why do we need Smokey?
- Make up a list of safety rules that would help prevent fire or related accidents. Examples: don't play with matches, don't

touch electrical appliances or outlets with wet hands, don't keep plants on windows where there are fire escapes.

- Draw a picture of your favorite holiday. How can Christmas trees, candles, fireworks, and other holiday items be dangerous? What can we do to use these items safely?
- Bring in a newspaper article about a fire. Write your own story about this fire.
- Learn some poems about firefighters (see below).

ART

- Draw pictures of fire hazards that might be found in the home. Use them to prepare a fire safety or "do's and don'ts with fire" bulletin board.

SCIENCE

- Watch an experiment conducted by the teacher using candles to demonstrate how fires can be put out. (Teacher: light a candle then extinguish it with water. Ask: how else can we put it out? Relight candle, lowering it into a deep glass or jar. Cover jar and ask: why did the candle go out? Answer: no air. Repeat using a small piece of paper. Ask: at home if a parent is cooking and a fire starts in the pot, how can you put it out? Answer: cover the pot to take away the air. Use this to introduce the concept of the fire triangle.)

MATHEMATICS

- Solve simple problems using numbers related to fire safety statistics. Example: in 1973 there were 12 fires due to fireworks. In 1975 there were 27 fires of the same nature. How many more fires were there in 1975?

"Fire Alarm Box"

by Firefighter Pablo R. Gonzalez

I'm a fire alarm box, red and tall
I'm here to protect you, one and all.
When there's a fire pull my handle down.
My fighters go anywhere in town
If there's no fire, please let me rest
So I'll be ready to do my best.

I'm a firefighter always on the go
If there's a fire – sun, rain, or snow.
When there's a fire I have to run
In order to get a job well done.
I'm your friend and I'll work hard for you.
But you have to help in my job, too.

I'm a little boy. I'm just like you.
I'm here to tell you what you should do.
Don't play with matches when you're alone.
If there's a fire, dial "911" on the phone
If you're out, pull the alarm and wait.
Help the firefighters so they won't be late.

SUGGESTED READING

Girl Scouts of America, Our Songs.
Louise Scott and J. J. Thompson. *Rhymes for Fingers and Flannelboards* (New York: McGraw Hill, 1960).
Barbara Williams. *I Know A Fireman.* (New York: Putnam, 1967).

GRADES THREE – FIVE

Topic 1: The Helpful and Harmful Sides of Fire

Understandings

The ability to harness and use fire and heat effectively helped the development of civilization.

Fire can destroy a city, neighborhood, or a forest.

Fire can be put out by removing the fuel or oxygen, or by lowering the temperature with water.

ACTIVITIES

SOCIAL STUDIES

- Find out how fire was used in colonial times (example: cooking, home heating).
- Find out how fire, heat, and steam were used to create new inventions (example: steam to drive engines, heat to process metals).

ART

- Draw pictures for a "fire time line." Each student illustrates a way in which fire contributed to the advancement of our society.

SCIENCE

- Find out how the seasons affect fires (example: summer – drought, forest fires, careless camping, open fire hydrants, blackouts causing people to use candles; winter – use of heaters and ovens to warm apartments, ice making it harder to fight fires; fall – leaf burning).
- Draw the fire triangle. Watch some experiments that show what happens when one leg of the triangle is removed.
- Make a list of steps to follow if you are on a camping trip and need to cook your food. How can people prevent forest fires? How does a forest fire affect the plants and animals of the forest?

LANGUAGE ARTS

- Write a story about a family whose apartment house has burned down. Tell how they feel about losing their home.

MATHEMATICS

- Learn about inequalities using the example fire = oxygen + fuel + heat. (example: fire $\neq$ oxygen + fuel or fire $\neq$ fuel + heat).

Topic 2: The Job of A Firefighter

Understanding

A firefighter has many responsibilities.

The job of a firefighter is a dangerous but rewarding one.

LANGUAGE ARTS

- After hearing a story about firefighters (or a guest speaker) develop a chart of the firefighters' work and the methods of fighting fire.

- Children pretend they are firefighters and role play the ways of saving people.
- Learn a song about firefighters.

Topic 3: Reporting A Fire	
Understandings	Only a real emergency should be reported. False alarms can kill.

ACTIVITIES

LANGUAGE ARTS

- See the film "Alarming Information." Discuss the dangers of sending a false alarm.
- Produce the play called "The False Alarm." (See page 16.) Incorporate this into a fire prevention assembly program.

Topic 4: Fire Prevention and Safety	
Understandings	Safety rules for school, home, and public transportation help to protect us. A major cause of accidents is carelessness. First aid measures may be necessary in cases of emergency.

ACTIVITIES

LANGUAGE ARTS

- Make a list of home safety rules, especially those for cooking and for the safe use of electricity.

ART

- Choose two or three home safety rules. For each one draw a picture showing the right and wrong way to handle the potential hazard.
- Distribute mimeographed copies of the practice house fire poster. (See page 17.) Try to discover all ten hazards. Using shoe boxes, paper, scissors, glue, crayons, etc., choose one room and construct a diorama of that room's hazards. Some students may wish to create their own original "hazard room." Put all completed dioramas together into a "hazard house." Display this in the library or other school area.

HEALTH

- Learn and practice the first aid for burns, shock, and what to do in case of burning clothing.
- Make up a checklist of fire hazards that may be in an apartment. Do a home fire inspection of your own apartment and report the results to the class.
- Discuss "C.A.R.E." as the safest course of action in case of a fire.

Topic 5: The Growing Problem of Fire

Understandings

The number of fires, deaths due to fire, and false alarms increase every year.

Neighborhood residents can help to prevent fires.

Neighborhood residents can increase their fire protection by certain actions.

ACTIVITIES

MATHEMATICS

- Using this data:

Year	Fires	False Alarms	Total Alarms *
1969	126,204	72,060	238,614
1970	127,249	88,407	261,131
1974	130,324	164,401	353,458
1975	137,237	203,851	400,096
1976	151,079	209,132	424,467
1977	129,619	263,932	460,501

**Includes other emergencies*

- Construct line graphs for the number of false alarms and fires.
- Construct a bar graph comparing the number of fires to false alarms.
- Using the number of fires, false alarms and total alarms, calculate how many of the total alarms each year were other emergencies.

SCIENCE

- Discuss the importance of water pressure to firefighters. How do open fire hydrants affect the water pressure in a community?

LANGUAGE ARTS

- Act out a skit encouraging people to use sprinkler caps on open fire hydrants.

SOCIAL STUDIES

- Draw a map of your neighborhood showing your house, the fire hydrants and alarm boxes. Circle the alarm box closest to your house and write down its location on your map.
- Role play based on a situation such as: what would you do if your friend told you that he/she wanted to turn in a false alarm because it would be fun? You see your friend heading toward the box and actually do this.

SUGGESTED READING

B. Brewster, *First Book of Firemen.* (New York: Franklin Watts, 1951).
N. Buckheimer. *Let's Go To A Firehouse.* (New York: Putnam, 1956).
Elizabeth Olds. *Big Fire.* (Hopewell, N.J.: Houghton-Mifflin Co., 1945).

The False Alarm

Bob: What a boring day!

John: There's absolutely nothing to do!

Billy: You wanna have some fun?

John: How?

Bob: What do you mean?

Billy:: Let's pull the fire alarm.

Bob: But there's no fire!

Billy: So what. Don't you wanna see all those fire engines zoomin' 'round the corner right to our block?

John: You can get into a lot of trouble callin in a false alarm.

Billy: Who's gonna know? This'll just be between the three of us. Nobody ever gonna find out.

John: I don't know. We might get in trouble.

Billy: Just think of all those fire engines; the sirens! I bet there'll be a hundred people on the corner soon as they hear the sirens.

Bob: It sounds exciting, but it's wrong.

Billy: Why?

Bob: Because firemen got other things to do besides going to false alarms.

Billy: Come on man! All those guys do is sleep and play cards all day. When's the last time you saw a fireman round here?

Bob: It's wrong.

Billy: So what! At least it'll give those guys some exercise. I bet it'll take' em an hour to get here.

Bob: What happens if a real fire begins?

Billy: What do you mean?

Bob: What happens if a real fire starts somewhere else while the firemen are over here?

Billy: Oh, come on! there's other firemen.

Bob: Sure, but they're farther away.

Billy: So?

Bob: So one minute can mean the difference between saving a person's life or having him burn up.

Billy: Your're talkin' like a idiot.

Bob: Remember reading about the fire in Brooklyn last week?

Billy: Yeh, why?

Bob: What happened?

Billy: I don't know. A building burned.

Bob: Forty-five people lost their homes and all their furniture and belongings. A two-year-old boy got burned to death and four people had to be taken to the hospital.

Billy: So?

Bob: So you know what happened?

Billy: What are you talkin' about?

Bob: I heard the fire company two blocks from that building was out on a false alarm. So instead of help coming in two minutes, it probably took ten minutes.

Billy: It wouldn't have mattered.

Bob: Maybe not. But how can you be sure?

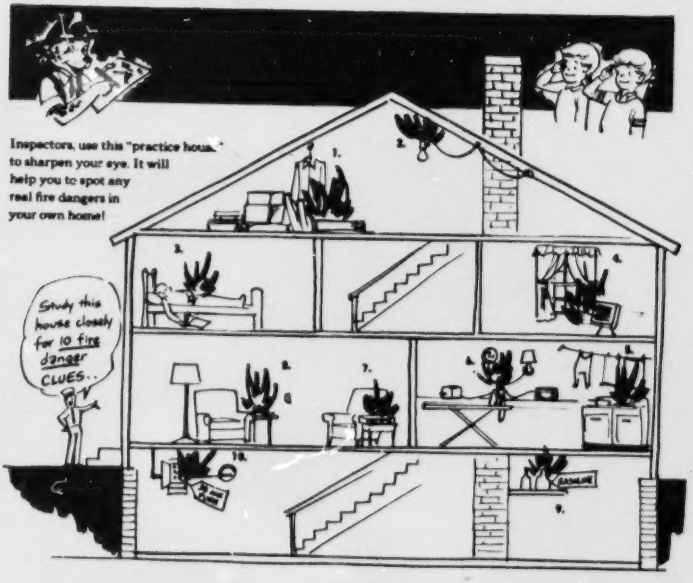
Billy: I can't.

Bob: How would you like to tell the mother of the kid who died it wouldn't have mattered?

Billy: Oh, come on Bob, you're gettin' all worked up. Let's go the movies.

Original play for elementary school children written by Michael Futtersak, teacher at CS 44, The Bronx.

Sparky Inspector's PRACTICE PAGE



ENTER "PRACTICE HOUSE" FIRE DANGERS HERE:

1. .....
2. .....
3. .....
4. .....
5. .....
6. .....
7. .....
8. .....
9. .....
10. .....

CORRECT ANSWERS

1) Rubbish in attic.
2) Extension cord over nail.
3) Smoking in bed.
4) Portable heater too near curtains.
5) Towels too near stove.
6) Too many appliances in one electrical outlet.
7) Matches where small children can reach them.
8) Overgrowing ostrepy.
9) Gasoline in glass bottle (or jug).
10) Wrong size fuse.

18

GRADES SIX — NINE

Topic 1: The Helpful and Harmful Sides of Fire

Understandings Although heat, steam, and electricity are useful sources of energy and power, their abuse may lead to accidents or injury.

ACTIVITIES

SCIENCE

- Find out how electrical fires start.
- Develop a set of safety rules for the use of electricity and electrical appliances.
- Use water and steam as examples in studying change of state (liquids to gases).
- Find out how we can use steam to generate power. What hazards are present in working with steam?

Topic 2: The Job of a Firefighter

Understandings Firefighters must meet certain qualifications and undergo special training for their jobs.

Forest rangers play an important part in safeguarding outdoor resources.

ACTIVITIES

CAREER EDUCATION

- Invite a speaker from the fire department to discuss the qualifications for and training of firefighters.
- Research the job of a forest ranger. How does he/she help in controlling forest fires? How can we help the forest ranger?

LANGUAGE ARTS

- Write a story about a day in the life of a forest ranger or firefighter.

Topic 3: Fire Prevention and Safety

Understandings Many injuries can be avoided by preparing your family for emergencies.

Fires and fire related accidents can be avoided.

Emergency first aid may be necessary in case of fire.

Cigarette smoking is not only a critical health problem but also becomes a safety problem when people smoke in bed and engage in other careless behavior.

ACTIVITIES

ART

- Design a collage or series of fire safety posters for display in school.
- Draw a detailed floor plan of your apartment. Indicate at least two escape routes.
- Make puppets of firefighters and scenery for a puppet show about fire safety.

LANGUAGE ARTS

- Write a play about fire safety. Produce it as a puppet show for the lower grades.
- Write a fictional eyewitness account of a fire for the school paper. Include all the details, stressing the need for safety consciousness
- Write an essay on the importance of home fire safety plans.

HOME ECONOMICS

- Learn the safety rules for cooking, ironing clothes, and using electrical appliances. Present these as if you were a salesperson in a store.
- Form a plan for dealing with common kitchen emergencies (example: grease fires in the oven, stovetop fire, etc.).

SCIENCE

- Research and diagram how a smoke alarm works. Discuss the importance of smoke alarms in homes and apartments.
- Find out how a sprinkler system works.
- After studying the principles of conduction, convection, and radiation, discuss the proper ways of escaping from a burning building (danger of superheated air, not opening doors that feel hot, staying low, etc.).

FOREIGN LANGUAGE

- See and discuss the film "I'm No Fool With Fire" (Available from N.Y.C. Fire Department).
- Write an essay on fire, fire prevention, or fire safety in the language that you are studying.

HEALTH

- Develop with your family a personalized home fire safety plan. Include alternate routes of escape, practice fire drills, meeting place for family outside of the building, etc.
- Discuss the proper order of actions in case of fire:
  - C = *Clear* the area of any people involved;
  - A = *Alert* the Fire Department by transmitting the alarm;
  - R = *Restrict* and confine the fire by closing doors;
  - E = *Extinguish* the fire, if possible.
- Learn and practice the first aid procedures for burns and shock.

SOCIAL STUDIES

- Discuss fire as a major threat to the existence of early colonial towns.
- Trace the growth of the New York City Fire Department. How did its growth parallel the growth of the city? Present this information on a chart along with illustrations (example: buildings and firefighting equipment).

Topic 4: The Growing Problem of Fire

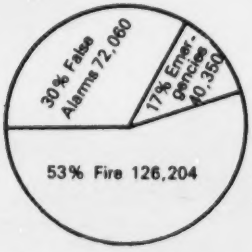
Understandings Fires pose a clear and present danger to our society. They destroy lives and property.

The number of alarms turned into the fire department increases every year.

ACTIVITIES

MATHEMATICS

- Using the data which appears on page 15, calculate the percentages of false alarms compared to actual fires and total alarms turned in for each year given.
- Practice converting the above percentages to fractions.
- Construct a circle graph for each year using the above computations. Example:



N.Y.C. Fire Department data 1969

- Organize the data appearing on page 15. Use it to practice finding the mean, median, and mode.

ART

- Make a collage depicting the destruction that fire can cause.

  Produce a film or filmstrip on a family whose life is disrupted because of fire.
- Prepare a photo eassay on buildings destroyed by fire.

Topic 5: Arson: A Growing Crime*

Understandings

Arson is the malicious and voluntary burning of someones' property without his/her consent. It is a crime.

There are many reasons for arson, none of them good.

Arson is a major factor in the destruction of neighborhoods.

ACTIVITIES

LANGUAGE ARTS

- Read some newspaper or magazine articles about arson and its effects. Discuss in class the social and economic effects.
- Write a letter inviting a fire marshall to address your class on the subject of arson.

SOCIAL STUDIES

- Discuss arson as a social problem. Include the reasons for arson (example: insurance payoffs and fraud, revenge, vandalism, arson for pay, etc.).
- Find out the penalty for the crime of arson.

**NOTE: See the special warning in the Introduction before proceeding with this topic.*

SUGGESTED READING

Samuel Arbitel. *Cities and Metropolitan Areas in Today's World.* (Palo Alto: Creative Publications, 1968).
Raymond Holden. *All About Fire.* (New York: Random House, 1964).

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FDNY PHOTO UNIT

OTHER RESOURCES

Field Trips

- Walk around school to learn where exit doors are located, which staircases to use, where fire alarm boxes are, etc.
- Plan a tour of the neighborhood to observe all the evidences of fire safety including fire escapes, fire hydrants, the firehouse, etc.
- Visit a local firehouse; call in advance to make arrangements with officer-on-duty.
- Visit the Fire Museum, 104 Duane Street, New York, New York 10007. Telephone: 570-4230. Make arrangements by writing to Lt. Clyde Williams, curator.
- Visit the Museum of the City of New York, Fifth Avenue and 103rd Street, New York, New York 10029. Telephone: 534-1672. Address letter well in advance for group reservations to Education Department. Guided tours are available. Has firefighting gallery with hand-pulled engines, prints of famous fires, etc.

Films*

Title	Time	Grade**
Alarming Information	7 min.	E, I
Donald's Fire Survival Plan	11 min.	E,I
Fire and Oxidation	11 min.	I
Heat and How We Use It	11 min.	E
Helpful Little Fireman	11 min.	E
I'm No Fool With Fire	8 min.	I
Learning About Electric Current	8 min.	I
Learning About Heat	8 min.	I
Our City Governemnt	9 min.	E, I
Our Community Services	12 min.	E
Physics and Fire Engines	11 min.	E
The Fireman	11 min.	E

**These films are available on loan from the Center for Library, Media, and Telecommunications, 131 Livingston Street, Brooklyn, New York 11201.*

** *E — elementary*
I — intermediate

NOTE TO TEACHERS: A thirty hour, two-credit, in-service course, "The Fire Department and the Schools," is available during the school year. [See The Staff Development Program Catalogue 1978-79. *Board of Education of the City of New York.]*

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